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09/901,000	07/09/2001	Teruo Kamada	SHM/12585	6853

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EXAMINER	
FISCHMANN, BRYAN R	

ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 10/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/901,000	KAMADA ET AL.	
	Examiner	Art Unit	
	Bryan Fischmann	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 9-18* is/are pending in the application.

4a) Of the above claim(s) *11 and 16-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,9,10 and 12-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Acknowledgments

1. The Amendment (paper 11) dated 7-17-2003 has been entered per paper 13 (see below).

Request for Continued Examination

2. The request filed on 8-26-2003 (paper 13) for a Request for Continuing Examination (RCE) under 37 CFR1.114 based on parent Application No. 09/901,000 is acceptable and an RCE has been established. An action on the RCE follows.

Election/Restriction

3. As noted on the last Office Action, non-originally submitted claims 11 and 16-18 are drawn to a species that was not originally presented. Therefore, as noted on the last Office Action, these claims remain withdrawn from consideration. See 37 CFR 1.142(b) and MPEP § 821.03.

4. Because applicant did not distinctly and specifically point out the supposed errors in the species election by original presentation made in the last Office Action (paper 10), the election has been treated as an election without traverse (MPEP § 818.03(a)).

5. An action on the merits of the originally presented invention, claims 1-3, 9, 10 and 12-15 follows.

Specification

6. Paragraph 0062 recites "In the case of h1<h2, consequently, it is desired to determine the value (n x d), namely, the diameter of the aperture 17 and the number of apertures 17...This process corresponds to the step of machining the apertures in the backing plate to meet the characteristic of the blank sheet". The meaning of this recited phrase is considered unclear.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention

8. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claim 9 recites "...wherein the aperture is designed so as to make a section modulus of the backing plate equal to a section modulus of the blank material...".

The Examiner cannot find support in the original claims or disclosure for this recitation in the original disclosure or claims and it is therefore considered new matter. Per Section 2163.06 of the MPEP, new matter in the claims should be rejected under 35 USC 112 first paragraph, written description requirement.

Also, note that Applicant teaches on page 11 of the Substitute Specification (paper 8) that the section modulus is $bh^2/6$ for both the backing plate and the blank, where "b" is the width and "h" is the thickness, or "height" of the section. Also note that from examination of Figure 1, that the "b", or "width" dimension of the blank (12) is many times that of the backing plate (13). In order for the section modulus of the blank and the backing plate to be equal, the thickness of the backing plate would have to be much greater than the blank.

Although Applicant has disclosed in paragraphs 0062 and 0063 a thickness, or "height" of the backing plate both less and greater than the height of the blank, there is no disclosure that this range of heights of the backing plate disclosed would include a height of the backing plate large enough such that the section modulus of the backing plate and blank are equal. Note that adding holes to the backing plate as taught by Applicant at the bend line would reduce the "b" dimension of the backing plate at the bend line, requiring an even greater backing plate height to allow the section modulus of the blank and backing plate to be the same.

Note that this rejection will be withdrawn if the Applicant can specifically identify support in the original disclosure for the above claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differ nces between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to

a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-3,10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures, in view of British Patent 2197810.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these figures teaches a vehicular part comprising a blank material (201) formed from a sheet metal (paragraph 0004 of the Instant Application) and having a bent portion (204 and 205); and

a backing plate (202) joined with the blank material (Figures 19A and 19B) and having a bent portion (204 and 205) corresponding in position to, and bent along a same bending line as the bent portion of the blank material.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures fails to teach the backing plate has at least one aperture formed at the bent portion and located on the bending line.

However, British Patent 2197810 teaches that a row of holes placed along a bend line facilitates bending (third paragraph of page 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a row of holes along the bending line of the bent portion of the backing plate of Prior Art Figures 19A and 19B, as taught by British Patent 2197810.

Although it is noted that British Patent 2197810 teaches that these holes are to facilitate hand bending, it is noted that claim 1 is an apparatus claim and the method of

forming the apparatus is not considered germane to the apparatus claimed. Note that Section 2113 of the MPEP recites "The patentability of a product does not depend on its method of production". Note that the apparatus of claim 1 may be formed by hand bending, as well as by machine bending, and the presence of a hole on the bend line will also facilitate machine bending.

Regarding claims 2 and 3, see Prior Art Figures 19A and 19B and paragraph 0005 of the Instant Application.

Regarding claim 10, note that British Patent 2197810 teaches plural apertures formed on the bending line on page 1.

Regarding claims 13 and 14, note that it is considered within the skill level of one of ordinary skill in the art to change the shape of an object. See Section 2144.04 of the MPEP. Changing the shape of an aperture from round to oblong or elongated rectangular shape is advantageous in that the oblong or elongated rectangular aperture provides a larger area of reduced moment of inertia further facilitating the bending of the backing plate along the bending line. Also, providing for larger "transition" areas, as in the case of an "oblong shape" as recited in claim 13, between that portion of the backing plate with reduced area moment of inertia (due to apertures) and with the "full" moment of inertia (no apertures) is also advantageous in that unwanted stress concentrations are reduced over that which would be present with only a round aperture only, due to the larger "transition area". Unwanted stress concentrations are disadvantageous in that they facilitate fatigue failure and corrosion.

Regarding claim 15, again note that it is within the skill level of one of ordinary skill in the art to change the shape of an object for reasons noted above. Note that an "irregularly" shaped aperture is advantageous in that a larger irregularly shaped object facilitates bending of the backing plate and reduces stress concentrations over a smaller round hole as discussed above. An irregularly shaped aperture may also be advantageous in that the irregularly shaped aperture may be made by a punch instead of making a round hole utilizing a drill. The use of a punch is generally less time consuming than a drill.

Note also that per Section 2129 of the MPEP, admitted prior art is available against the claims.

11. Claims 1-3, 10 and 12-15 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures, in view of Japanese Patent 59-202119.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these figures teaches a vehicular part comprising a blank material (201) formed from a sheet metal (paragraph 0004 of the Instant Application) and having a bent portion (204 and 205); and

a backing plate (202) joined with the blank material (Figures 19A and 19B) and having a bent portion (204 and 205) corresponding in position to, and bent along a same bending line as the bent portion of the blank material.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures fails to teach the backing plate has at least one aperture formed at the bent portion and located on the bending line.

However, Japanese Patent 59-202119 teaches the use of an aperture (3) along a bend line facilitates bending (English Language Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a row of holes along the bending line of the bent portion of the backing plate of Prior Art Figures 19A and 19B, as taught by Japanese Patent 59-202119.

Regarding claim 10, note that per Section 2144.04 of the MPEP, it is within the skill level of one of ordinary skill in the art to duplicate parts. Duplicating the hole (3) along the bending line is advantageous in that additional holes, especially in wider parts, further facilitates bending.

Regarding claim 12, see Figure 2 of Japanese Patent 59-202119.

Regarding claim 13, see Figure 3 of Japanese Patent 59-202119.

Regarding claim 14, note that it is considered within the skill level of one of ordinary skill in the art to change the shape of an object. See Section 2144.04 of the MPEP. Changing the shape of a hole from round to an elongated rectangular shape is advantageous in that the elongated rectangular aperture provides a larger area of reduced moment of inertia further facilitating the bending of the backing plate along the bending line. A rectangular aperture may also be advantageous in that the rectangular-

shaped aperture may be made by a punch instead of making a round hole utilizing a drill. The use of a punch is generally less time consuming than a drill.

Regarding claim 15, again note that it is within the skill level of one of ordinary skill in the art to change the shape of an object for reasons noted above. Note that an "irregularly" shaped aperture is advantageous in that a larger irregularly shaped object facilitates bending of the backing plate and reduces stress concentrations over a smaller round hole as discussed above. An irregularly shaped aperture may also be advantageous in that the irregularly shaped aperture may be made by a punch instead of making a round hole utilizing a drill. The use of a punch is generally less time consuming than a drill.

Note also that per Section 2129 of the MPEP, admitted prior art is available against the claims.

Response to Applicant's Remarks (paper 11) and Examiner's Comments

12. The amendments of paragraphs 0058-0061 of paper 8 in paper 11 to change the term "cross sectional coefficient" to the term "section modulus" is considered acceptable and does not constitute new matter, as the originally presented formula associated with these terms, $bh^2/6$, is commonly known from the discipline of Mechanics of Materials to be the section modulus for a rectangular cross section.

13. Regarding the traversal of the 112 1st paragraph rejection of claim 9 made in the last Office Action (paper 10), Applicant recites in the "Remarks" section of paper 11 "...the Examiner is referred to paragraphs [0055]-[0063] of the application...".

After carefully reviewing paragraphs 0055-0063, the Examiner still fails to find support for the claim 9 recitation "...wherein the aperture is designed so as to make a section modulus of the backing plate equal to a section modulus of the blank material...". As already noted, the closest support in these paragraphs is the disclosure that the section modulus of the blank and the backing plate is $bh^2/6$ and that the backing height "h" may be greater than the blank height. However, as noted, since the "b" dimension of the blank is much greater than the backing plate, the "h" dimension of the backing plate would have to be much larger that the "h" dimension of the blank in order for the section modulus of the backing plate and the plate to be equal. There is no disclosure that the Applicant contemplated a range of heights of the backing plate that was large enough to allow the section modulus of the backing plate and blank to be equal. Also note that Applicant's Instant Invention is directed toward the placement of apertures along the fold line of the backing plate. This would tend to reduce the section modulus of the backing plate, as the apertures would reduce the "b" dimension.

14. Regarding the traversal of the 103 rejection of claims as being unpatentable over Prior Art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures, in view of British Patent 2197810, the Applicant recites the following in the "Remarks" section of paper 11:

(1) Applicant's Remark – "The Examiner is citing the British '810 patent as teaching a plate having holes formed along a bend line to facilitate bending thereof... In this regard, it is noted that the portion of the British '801 disclosure relied upon by the

Examiner is actually in the 'Background' section... and is referred to as being undesirable as it 'gives a somewhat unsightly result...".

Examiner's Response – The Examiner notes that British '801 teaches that it is known to place apertures on a bend line to facilitate bending on page 1. The Examiner also notes that British '801 offers the opinion that the holes give a "somewhat unsightly result". However, what may be considered an "unsightly result" by the author of British '801 may not be considered unsightly by another. Also, what is considered "unsightly" is largely dependant upon the application. British '801 discusses making bends in cabinets. While holes in a bend in a cabinet, say along the "outer periphery" would likely be considered "unsightly", since this is a piece of furniture, holes in a bend line of a backing plate of a hood of an automobile would not likely be considered unsightly. If Applicant thought this was the case, it is unlikely that Applicant would have proposed the Instant Invention.

(2) Applicant's Remark – "...it is noted that the British '810 patent does not pertain to backing plates...but rather pertains to...a blank material for forming a cabinet or box...Therefore...it is noted that neither of the references teaches a backing plate having apertures or holes formed at the bend lines...Therefore, if the Prior Art of Figs. 19A-19B were combined with the teachings of British Patent 2197810...the resulting structure would include a solid backing plate and a blank having grooves at the bend lines...moreover, even if the references are combined as advocated by the Examiner...the resulting structure would be a solid backing plate and a blank having holes at the bend lines...".

Examiner's Response – The Examiner offers the following comments:

a) Regarding the first part of the above recitation, the Examiner fails to understand how combining a teaching of a backing plate with a bend and a panel with apertures provided along a bend line results in a structure that would include a solid backing plate and a blank having grooves at the bend lines, as set forth above by Applicant.

b) Regarding the last part of the above recitation, the Examiner fails to understand how combining a teaching of a backing plate with a bend and a panel with apertures provided along a bend line results in a structure of a solid backing plate and a blank having holes at the bend lines. The Applicant is apparently asserting that combining the two teachings would not result in a combined structure having properties of each but simply the two structures separately.

c) Also note that Section 2145 of the MPEP recites "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference...Rather, the test is what the combined teachings would have suggested to those of ordinary skill in the art...It is not necessary that the inventions of the references be physically combinable to render obvious the invention under review...".

Note that in this case, a primary reference with a teaching of a structure with a bend line without holes and a secondary reference with a teaching of a structure with holes in a bend line to facilitate bending, would certainly suggest that the primary reference may be modified to facilitate bending by adding holes on the bend line, as

taught by the secondary reference. Note also that the teaching of the secondary reference (holes along a bend line to facilitate bending) may be "bodily" incorporated into the primary reference (a structure with a bend line).

15. Regarding the traversal in paper 11 of the 103 rejection of claims as being unpatentable over Prior Art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures, in view of Japanese Patent 59-202119, the Applicant's arguments are similar to those made in the traversal of the 103 rejection of claims using the prior art figures in combination with British Patent 2197810. Note for example, the Applicant recites "if the Prior art Figs. 19A-19B were combined with the teachings of JP '119 the resulting structure would...be a solid backing plate and a blank having a hole at the bend line. The Examiner's response to a similar argument above using the combination of Prior Art Figures 19A and 19B and British Patent 2197810 results in a single combined structure with the teaching of the secondary reference incorporated into the primary reference structure, as opposed to two separate structures applies.

16. In view of the amendments to paragraphs 0058-0061, which clarifies what the section modulus actually is, as well as Applicant's arguments in paper 11, the 103 rejection of claim 9 is withdrawn. Note, however, that claim 9 remains rejected under 35 USC 112 1st paragraph.

Conclusion

17. Although the claims were not amended, which could potentially make this action final under Section 706.07(b) of the MPEP, this action is made non-final, since the Amendment (paper 11) was previously not entered and an advisory action (paper 12) was sent-out instead stating that the amendments to the specification would constitute new matter. Per Section 706.07(b) of the MPEP, amendments which were previously not entered due to new matter, cannot later be entered and the resulting action be made final. Also note that the 103 rejection of claim 9 was withdrawn due to amendments to the specification and Applicant's remarks in paper 11.

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bryan Fischmann whose telephone number is (703) 306-5955. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson, can be reached on (703) 308-0885. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

10-9-3
BRYAN FISCHMANN
PATENT EXAMINER